REMARKS

Claims 1-3, 5-8, 10-14, 16-19, 21-25, 27, 28, 30-33, 35, 36, 38, and 41 are pending. Claims 1, 6, 11, 16, 21, 27, 30, 35, 38, and 41 are the independent claims. Based on the following remarks, Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding rejections.

Claim Rejections – 35 USC S. 103

The Examiner rejected claims 1-14, 16-19, 21-25, 27, 28, 30-33, 35, 36, 38 and 41 under 35 U.S.C. 103(a) as being unpatentable over Wu (US Patent No. 6,700,933). Claims 4 and 9 are canceled rendering the rejection to these claims moot. Applicant respectfully traverses the Examiner's rejection with regard to claims 1-3, 5-8, 10-14, 16-19, 21-25, 27, 28, 30-33, 35, 36, 38, and 41 since Wu does not teach or suggest each element of independent claims 1, 6, 11, 16, 21, 27, 30, 35, 38, and 41 for at least the following reason.

In particular, Wu fails to teach or suggest the enhancement encoding and decoding processing is independent of any intermediate data in the base layer as a result of a change in the calculation of the enhancement layer quantization residue *wherein an enhancement residual addition applies to a final base layer output after a base layer clipping operation* as claimed or similarly claimed.

The Examiner cites Figure 20 of Wu and stating that in Wu the intermediate enhancement layer can be considered a "base layer" to the upper enhancement layer, in which case the output of the clipping operation 650 is fed to a frame buffer 652 and then a motion compensator 624. The Examiner further states that the output in Wu is then fed to a DCT 662, HQPD predictor 664, and finally to an adder 672. Further, the Examiner states that in Wu no calculation of enhancement layer quantization residue is performed in the intermediate or upper enhancement layers.

Applicant respectfully disagrees with the Examiner. Applicant asserts that Figure 20 is similar to Figure 2 (prior art) in the present application. Since the restoration of DCT coefficients for the enhancement layer requires access to the DCT coefficients in the base layer encoder, the decoding process of both the enhancement layer decoder and base layer decoder in Wu is coupled. The enhancement layer decoder also accesses the base layer motion prediction results to form the final enhancement reconstruction. In particular, as shown in FIG. 20 of Wu and noted in column 21, lines 23-56:

> FIG. 20 shows the complementary video decoder 98', which may be implemented by client 66, to decode the video data files received over the network 64 (FIG. 3). The decoder 98' has a bit layer decoder 602 that decodes the bitstream for the base layers and two enhancement layer decoders 604 and 606 that decode the bitstream to recover the enhancement layers. The decoder 98' also has an advance prediction bit-plane coder (APBIC) 610, that is essentially identical to the encoder-side APBIC 510 in FIG. 19.
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> A variable length decoder (VLD) module 620 decodes the bit stream for the base layer to recover the quantized LQPD coefficients. Motion vectors (MVs) from the decoding are passed to motion compensators 622 and 624. **These coefficients are dequantized by a dequantizer (i.e., the "Q.sup.-1 " module) 626** and then passed through an inverse DCT (IDCT) transform 628 to reconstruct the base layer. The reconstructed base layer is summed via summation 630 with a predicted base layer from the motion compensator 622, clipped by clipping module 632, and output. The reconstructed base layer is also stored in frame buffer 634.
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> **A combined VLD and bit plane decoder module 640 decodes the bit stream carrying the lower quality DCT residues. The recovered DCT coefficients are summed via summation 642 with the dequantized LQPD coefficients from the base layer decoder 602 to reproduce the encoded DCT (ECD) coefficients. The ECD coefficients are passed to an IDCT transformer 644 to reconstruct the enhancement layer. The reconstructed enhancement layer is summed via summation 646 with either a predicted base layer from the motion compensator 622 or a predicted enhancement layer from the motion compensator 624, depending upon the position of switch 648.** The compensated enhancement layer is clipped by clipping module 650 and output. The reconstructed enhancement layer is also stored in frame buffer 652. [Emphasis added]

Applicant asserts that the teachings of Wu are very different from the present claimed invention. In particular, Wu fails to teach or suggest the enhancement encoding and decoding

processing is independent of any intermediate data in the base layer as a result of a change in the calculation of the enhancement layer quantization residue *wherein an enhancement residual addition applies to a final base layer output after a base layer clipping operation* as claimed or similarly claimed.

Therefore, for at least this reason, independent claims 1, 6, 11, 16, 21, 27, 30, 35, 38, and 41 (and their respective dependent claims) are patentable over Wu. Accordingly, Applicant requests that the rejections under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

CONCLUSION

Applicant respectfully submits that all of the stated grounds of rejection have been properly traversed accommodated or rendered moot. Applicant believes that a full and complete response has been made to the outstanding Office Action. Thus, Applicant believes that the present application is in condition for allowance, and as such, Applicant respectfully requests reconsideration and withdrawal of the outstanding objections and rejections, and allowance of this application.

If the Examiner has any questions, he is invited to contact the undersigned at (703) 633-0931.

Respectfully submitted,
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